

ASARCO



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Linda Jacobson  
RCRA Project Manager  
US EPA Region VIII  
8ENF-T  
999 18<sup>th</sup> Street, Suite 300  
Denver, Colorado 80202-2466

April 12, 2005

SENT BY CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

**CONSENT DECREE  
CIVIL ACTION NO. CV 98-3-H-CCL  
EAST HELENA SITE  
WORK PERFORMED IN MARCH 2005  
PROGRESS REPORT #83**

Dear Ms. Jacobson:

On May 5, 1998, Asarco Incorporated (Asarco) and the United States Environmental Protection Agency (EPA) entered into a Consent Decree (Decree) to further the objectives of the Resource Conservation and Recovery Act (RCRA) and the Clean Water Act (CWA). Section XI of the Decree (Reporting: Corrective Action) requires Asarco to submit certified monthly progress reports to EPA which discuss the actions taken by Asarco in achieving compliance with the Decree. The reports are to be submitted to EPA no later than the twentieth (20<sup>th</sup>) day of the following month. The following describes only those activities that have occurred or are related to projects performed during March 2005. The historical actions taken by Asarco in achieving compliance with the Decree are contained in previous monthly progress reports.

**a. Describe the actions, progress, and status of projects which have been undertaken pursuant to Part VII of the Decree;**

The Phase I RFI Site Characterization draft Report was submitted to EPA on April 1, 2003. On January 14, 2005, Asarco received EPA's draft comments on the draft RFI. Throughout February and March 2005, Asarco and EPA representatives discussed the specifics of EPA's draft comments.

- February 3, 2005 - A daylong meeting took place in Denver to discuss the majority of the technical issues contained within EPA's draft comments.

- February 24, 2005 - A telephone conference call took place to discuss the risk assessment issues contained within the EPA's draft comments.
- March 16, 2005 - A telephone conference call took place to discuss the groundwater characterization issues contained within EPA's draft comments.
- March 30, 2005 - A telephone conference call took place to discuss EPA's March 29, 2005 memorandum relating to groundwater arsenic plume migration issues.

During the February 3, 2005 meeting in Denver, EPA provided Asarco with comments relating to Energy Laboratory's Arsenic Speciation Standard Operating Procedure (SOP) that was provided in the September 2004 RCRA Consent Decree monthly progress report. On February 24, 2005, EPA transmitted to Asarco additional comments that compared the sum of AsIII and AsV to the dissolved arsenic concentration in select groundwater well samples. Asarco has prepared responses to these comments, which include conducting an Arsenic Speciation Stabilization Study. Asarco will forward these responses to EPA in early April 2005.

On March 14, 2005, Asarco submitted to EPA (Richard Wilkin) comments on the draft Technical Work Plan and draft Construction Quality Control Plan that relates to the pilot scale installation of the permeable reactive barrier at the East Helena Plant.

On March 16, 2005, Asarco completed the bi-monthly residential groundwater well sampling outlined in Asarco's on-going Post Remedial Investigation (RI)/Feasibility Study (FS), Long Term Monitoring Program. Under this program, the Jensen, Nordstrom, and Yuricic irrigation groundwater wells and the Corbett (formerly Marcum) residential groundwater drinking water wells were scheduled to be sampled. The two irrigation wells located at the Nordstrom and Yuricic homes were winterized and could not be sampled. The analytical dissolved arsenic result obtained from the Corbett groundwater well was below the laboratory detection limit of 0.002 mg/l. The analytical dissolved arsenic result obtained from the Jensen groundwater well was measured at the laboratory detection limit of 0.002 mg/l.

The Jensen groundwater well water sample (collected on March 16, 2005 from the outside garden spigot) contained a discernible amount of sediment and turbidity, even after several minutes of flushing. During the sample collection, the well owner commented that the outside garden spigot head was aged and that the mechanism was rusting. He further commented that the unlined, dry well gravel might be filling with sediment and that the underground valve might not be properly closing. Both of these conditions could account for the observed turbidity and the anomalous arsenic sample result.

In an attempt to validate the March 16, 2005 arsenic sample result, two follow up samples were collected from the Jensen groundwater well on March 31, 2005. One sample was collected from the outside watering spigot located on the south side of the Jensen home while a second sample was collected from the original outside garden spigot located in the backyard. The groundwater that is piped to the outside watering spigot located on the south side of the Jensen home is not conditioned with a water softener.

Small particles of black sand were initially observed in the groundwater obtained from the outside watering spigot but were absent after four to five minutes of flushing. The owner of the well commented that, in the past, similar sand had been observed when the well casing was opened and serviced. The groundwater well sample collected from the outside watering spigot was clear of this observed black sand. Similarly, the groundwater water sample collected from the original outside garden spigot was clear of any visual turbidity. The analytical dissolved arsenic results obtained from the two March 31, 2005 groundwater samples collected from the Jensen groundwater well were below the laboratory detection limit of 0.002 mg/l.

In summary, the routine bimonthly groundwater sampling collected from the Jensen groundwater well on March 16, 2005 showed a low-level arsenic concentration result at the laboratory detection limit of 0.002 mg/l. The March 31, 2005 follow-up sampling showed arsenic concentration results below laboratory detection limits, suggesting the detectable results may have been related to turbidity observed in the March 16, 2005 sample. Low-level arsenic concentrations have been observed in other water supply wells in the past, particularly in wells that have not been used over the winter period and when sampled showed elevated turbidity and debris in the water at the time of initial well purging. The follow-up sampling of these wells also showed arsenic concentrations returning to below laboratory detection limits, which is attributed to collection of samples after a more thorough purging of the well had been performed.

A summary of the correspondence transmitted as part of the East Helena Consent Decree in March 2005 is included in Attachment 1.

- b. Identify any requirements under the Part VII of the Decree that were not completed in a timely manner, and problems or anticipated problem areas affecting compliance with the Decree;**

There were no requirements that were not completed in a timely manner nor were there problems or anticipated problem areas that affect compliance with the Decree.

- c. Describe projects completed during the prior month, as well as activities scheduled for the next month;**

In accordance with the March 2000 Groundwater Source Control Interim Measures Design Analysis, Plans, and Specification report, the speiss handling area and the former acid plant sediment drying area are being inspected monthly with the last inspection occurring on March 1, 2005. This monthly inspection documented the condition of the interim measures. The inspection confirmed that all scheduled interim measures were in place.

Phase III Sparge Testing – On February 3, 2005, Jon Nickel hand-delivered the Interim Measures Air Sparge Pilot Test Draft Summary Report to you.

CAMU Landfill - The construction of the CAMU landfill is complete. The Final Construction Report for the CAMU-Phase 1 Cell was hand-delivered to EPA on January 23, 2002. In accordance with the July 2000 CAMU Design Analysis Report (Operation and Maintenance Plan), the CAMU is being inspected monthly with the last inspection occurring on March 16, 2005. This monthly inspection documented the condition of the CAMU.

RCRA Facility Investigation (RFI) - The Phase I RFI Site Characterization draft Report was submitted to EPA on April 1, 2003. On January 14, 2005, Asarco received EPA's draft comments on the draft RFI. Throughout the last two months, Asarco and EPA have discussed the contents of EPA's draft comments. Asarco awaits receipt of EPA's final comments.

**d. Describe, and estimate the percentage of, studies completed;**

The original bench-scale testing program for the Phase III air sparge test is 100% complete. The testing has been expanded to include additional column tests. The additional testing is 100% complete. The sparge pilot test program is 100% complete. The Interim Measures Air Sparging Pilot Test Summary Draft Report was submitted to EPA on February 3, 2005.

The RFI groundwater modeling is 100% complete. The results of this modeling exercise have been included in the Phase I RFI Site Characterization draft Report.

The Interim Measures Work Plan Addendum (May 2002) and responses to EPA's July 1, 2002 comments are 100% complete.

The implementation (field investigations) of the Interim Measures Work Plan Addendum (May 2002, and its revisions) is 100% complete.

**e. Describe and summarize all findings to date;**

The details of past findings through February 2005 are described and summarized in previous monthly progress reports.

**f. Describe actions being taken to address problems;**

There were no actions taken to address problems associated with the Decree.

**g. Identify changes in key personnel during the period;**

Asarco continues to use the services of Asarco Consulting Incorporated and Hydrometrics Incorporated to perform the various activities required under the Consent Decree. The Consent Decree activities will continue to be administrated under the direction of Robert Miller.

**h. Include copies of the results of sampling and tests conducted and other data generated pursuant to work performed under Part VII of the Decree since the last Progress Report. Asarco may submit data that has been validated and confirmed by Asarco to supplement any prior submitted data. Updated validated and confirmed data shall be included with the RFI Report, if not delivered before;**

The Energy Laboratory raw analytical sample results obtained from the March 2005 Post Remedial Investigation (RI)/Feasibility Study (FS), Long Term Monitoring Program (Bi-Monthly Residential Groundwater Wells) are attached to this monthly progress report. This data is currently being validated and will be submitted once completed.


**i. Describe the status of financial assurance mechanisms, including whether any changes have occurred, or are expected to occur which might affect them, and the status of efforts to bring such mechanisms back into compliance with the requirements of this Decree.**

ASARCO is still unable, at this time, to make the required financial assurance demonstration using the mechanisms outlined in the East Helena Consent Decree. However, EPA agreed in paragraph 36 of the subsequent national consent decree (U.S. v. ASARCO and Southern Peru Holdings Corp., No. CV 02-2079-PHX-RCB (entered February 3, 2003)) to forego penalties for any noncompliance with financial assurance requirements in RCRA or CERCLA consent decrees (such as the East Helena decree) in calendar years 2003-2005. (Paragraph 35 of the decree also forgoes penalties for past inability to demonstrate financial assurance from December 1997 to the entry of the Decree.) ASARCO continues to try and improve its financial position and hopes to be able to make the required financial assurance demonstration in the future.

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CERTIFICATION  
PURSUANT TO U.S. v ASARCO INCORPORATED  
(CV-98-3-H-CCL, USDC, D. Montana)

I certify under penalty of law that this document, March 2005 Progress Report and all attachments, were prepared under my direct supervision in accordance with a system designed to assure that qualified personnel gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

Signature   
Name: Douglas E. McAllister  
Title: Vice President  
Date: April 11, 2005

CONSENT DECREE  
EAST HELENA SITE  
MARCH 2005 PROGRESS REPORT

SUMMARY OF CORRESPONDENCE  
ATTACHMENT 1

DATE OF TRANSMITTAL	CORRESPONDENCE SENT FROM	CORRESPONDENCE SENT TO	SUBJECT	RESPONSE
March 14, 2005	Jon Nickel	Richard Wilkin	Asarco Comments on Draft Technical Work Plan and Draft Construction Quality Control Plan - Installation of Pilot-Scale PRB	Awaiting EPA Responses
Attached to This Progress Report	Doug McAllister	Linda Jacobson	Raw Analytical Data from the March 2005 Post RI/FS Long-Term Monitoring Project (Bi-Monthly Residential Groundwater Wells)	No Formal Response Required

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**Raw Data**

**Asarco East Helena Plant**

**Bi-Monthly Residential Groundwater Wells**

**March 2005**





## LABORATORY ANALYTICAL REPORT

Client: Asarco LLC  
Project: Bi-Monthly Residential Well Monitoring Mar. 2005  
Lab ID: H05030118-001  
Client Sample ID: EHR-0305-300

CORBETT

Report Date: 03/24/05  
Collection Date: 03/16/05 14:45  
Date Received: 03/17/05  
Matrix: Drinking Water

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	183	mg/L		10		A2540 C	03/21/05 12:02 / ljm
INORGANICS							
Sulfate	50	mg/L		1		E300.0	03/21/05 12:25 / KC
METALS, DISSOLVED							
Arsenic	ND	mg/L		0.002		E200.8	03/23/05 00:38 / jjw

Report Definitions: RL - Analyte reporting limit.  
QCL - Quality control limit.

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.



## LABORATORY ANALYTICAL REPORT

Client: Asarco LLC  
Project: Bi-Monthly Residential Well Monitoring Mar. 2005  
Lab ID: H05030118-002  
Client Sample ID: EHR-0305-301

Report Date: 03/24/05  
Collection Date: 03/16/05 15:00  
Date Received: 03/17/05  
Matrix: Drinking Water

CORROTT DUPLICATE

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
METALS, DISSOLVED							
Arsenic	ND	mg/L		0.002		E200.8	03/23/05 01:12 / jjw

Report  
Definitions: RL - Analyte reporting limit.  
QCL - Quality control limit.

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.



## LABORATORY ANALYTICAL REPORT

Client: Asarco LLC

Project: Bi-Monthly Residential Well Monitoring Mar. 2005

Lab ID: H05030118-003

Client Sample ID: EHR-0305-302

Report Date: 03/24/05

Collection Date: 03/16/05 15:10

Date Received: 03/17/05

Matrix: Drinking Water

FIELD BLANK

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
METALS, DISSOLVED							
Arsenic	ND	mg/L		0.002		E200.8	03/23/05 01:19 / jjw

Report  
Definitions: RL - Analyte reporting limit.  
QCL - Quality control limit.

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.



## LABORATORY ANALYTICAL REPORT

Client: Asarco LLC

Project: Bi-Monthly Residential Well Monitoring Mar. 2005

Lab ID: H05030118-004

Client Sample ID: EHR-0305-303

Report Date: 03/24/05

Collection Date: 03/16/05 17:00

Date Received: 03/17/05

Matrix: Drinking Water

JENSEN (OUTSIDE GARDEN)  
SP160T

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	538	mg/L		10		A2540 C	03/21/05 12:02 / ljm
INORGANICS							
Sulfate	218	mg/L		1		E300.0	03/21/05 12:37 / KC
METALS, DISSOLVED							
Arsenic	0.002	mg/L		0.002		E200.8	03/22/05 03:55 / car

Report  
Definitions: RL - Analyte reporting limit.  
QCL - Quality control limit.

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.



## LABORATORY ANALYTICAL REPORT

Client: Asarco LLC

Project: Bi-Monthly Residential Well Monitoring Mar. 2005

Lab ID: H05040005-001

Client Sample ID: EHR-0305-304

Report Date: 04/08/05

Collection Date: 03/31/05 17:10

Date Received: 04/01/05

Matrix: Drinking Water

JENSEN  
(OUTSIDE WATERING SPIGOT)

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	527	mg/L		10		A2540 C	04/04/05 13:41 / ljm
INORGANICS							
Sulfate	222	mg/L		1		E300.0	04/06/05 14:46 / qed
METALS, DISSOLVED							
Arsenic	ND	mg/L		0.002		E200.8	04/07/05 04:22 / car

Report  
Definitions: RL - Analyte reporting limit.  
QCL - Quality control limit.

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.



## LABORATORY ANALYTICAL REPORT

Client: Asarco LLC

Project: Bi-Monthly Residential Well Monitoring Mar. 2005

Lab ID: H05040005-002

Client Sample ID: EHR-0305-305

Report Date: 04/08/05

Collection Date: 03/31/05 17:20

Date Received: 04/01/05

Matrix: Drinking Water

JENSEN  
(OUTSIDE GARDEN SPIGOT)

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	503	mg/L		10		A2540 C	04/04/05 13:42 / ljm
INORGANICS							
Sulfate	194	mg/L		1		E300.0	04/06/05 14:57 / qed
METALS, DISSOLVED							
Arsenic	ND	mg/L		0.002		E200.8	04/07/05 04:28 / car

Report  
Definitions: RL - Analyte reporting limit.  
QCL - Quality control limit.

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.



## LABORATORY ANALYTICAL REPORT

Client: Asarco LLC

Project: Bi-Monthly Residential Well Monitoring Mar. 2005

Lab ID: H05040005-003

Client Sample ID: EHR-0305-306

Report Date: 04/08/05

Collection Date: 03/31/05 17:25

Date Received: 04/01/05

Matrix: Drinking Water

DUPLICATE

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
METALS, DISSOLVED							
Arsenic	ND	mg/L		0.002		E200.8	04/07/05 04:35 / car

Report Definitions: RL - Analyte reporting limit.  
QCL - Quality control limit.

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.



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02-24

## LABORATORY ANALYTICAL REPORT

Client: Asarco LLC

Project: Bi-Monthly Residential Well Monitoring Mar. 2005

Lab ID: H05040005-004

Client Sample ID: EHR-0305-307

Report Date: 04/08/05

Collection Date: 03/31/05 17:30

Date Received: 04/01/05

Matrix: Drinking Water

FIELD BLANK

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
METALS, DISSOLVED							
Arsenic	ND	mg/L		0.002		E200.8	04/07/05 04:42 / car

Report Definitions: RL - Analyte reporting limit.  
QCL - Quality control limit.

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.